



J004 Rec'd PCT/PTO 19 OCT 2005

PTO/SB/21 (09-04)

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	10/510,698
Filing Date	April 9, 2003
First Named Inventor	Berlin
Art Unit	unassigned
Examiner Name	unassigned
Attorney Docket Number	MHK.051.004

ENCLOSURES (Check all that apply)

- | | | |
|---|--|---|
| <input type="checkbox"/> Fee Transmittal Form
<input type="checkbox"/> Fee Attached
<input checked="" type="checkbox"/> Amendment/Reply
<input type="checkbox"/> After Final
<input type="checkbox"/> Affidavits/declaration(s)
<input type="checkbox"/> Extension of Time Request
<input type="checkbox"/> Express Abandonment Request
<input type="checkbox"/> Information Disclosure Statement

<input type="checkbox"/> Certified Copy of Priority Document(s)
<input type="checkbox"/> Reply to Missing Parts/ Incomplete Application
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53 | <input type="checkbox"/> Drawing(s)
<input type="checkbox"/> Licensing-related Papers

<input type="checkbox"/> Petition
<input type="checkbox"/> Petition to Convert to a Provisional Application
<input type="checkbox"/> Power of Attorney, Revocation
<input type="checkbox"/> Change of Correspondence Address

<input type="checkbox"/> Terminal Disclaimer

<input type="checkbox"/> Request for Refund

<input type="checkbox"/> CD, Number of CD(s) _____
<input type="checkbox"/> Landscape Table on CD | <input type="checkbox"/> After Allowance Communication to TC

<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences

<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)

<input type="checkbox"/> Proprietary Information

<input type="checkbox"/> Status Letter
<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
Copy of Notification mailed 9/20/2005
Response To Notification mailed 9/20/2005
Printout of Sequence Listing
Diskette containing Sequence Listing |
|---|--|---|

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	McIntyre Harbin & King		
Signature			
Printed name	Lawrence Harbin		
Date	October 19, 2005	Reg. No.	27,644

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature	571-273-8300 (PTO central fax)		
Typed or printed name	Lawrence Harbin	Date	October 19, 2005

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



USSN 10/510,698
Att'y Docket No . MHK-051-004

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re of the Application of

Kurt Berlin

US Serial Number: 10/510,698

35 U.S.C. 371 Filing Date: October 8, 2004

International Application Number:
PCT/IB03/01791

International Filing Date: April 9, 2003

For: METHOD FOR ANALYSIS OF
METHYLATED NUCLEIC ACIDS

Group Art Unit: to be assigned
Examiner: to be assigned

Docket No.: MHK-051-004

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO NOTIFICATION OF DEFECTIVE RESPONSE DATED 09/20/2005 AND
STATEMENTS UNDER 37 CFR 1.822, AND/OR 1.823, AND 37 CFR 1.821(e), 1.821(f),
1.821(g), 1.825(b) or 1.825(d)

Dear Sir:

This letter responds to the Notification of Defective Response dated 09/20/2005 and accompanying Raw Sequence Listing Error Report (copies attached here), indicating that the paper or compact disc copy of the Sequence Listing is not the same as the computer readable form required by 37 CFR 1.821.1(e). Please be advised that we received only a partial Raw Sequence Listing (namely, only the first page of six pages total was forwarded to the undersigned) with the Error Report. The page containing the actual error in the sequence listing

was not forwarded with the September 20 Notification. Although we requested the additional pages from Mr. Lamont Hunter of the PCT branch, our request was not satisfied. Mark Spencer of the STIC branch was kind enough to troubleshoot the error over the telephone when provided the serial number of the subject application.

Accordingly and in response, we are submitting:

- 1) a substitute (corrected) paper and CRF of the Sequence Listing in compliance with the requirements of 37 CFR 1.822 and/or 1.823; and
- 2) an Amendment specifically directing its entry into the application, as requested. This is the same Amendment previously filed on May 18, 2005, with the first CRF Sequence Listing.

The content of the sequence listing information recorded in computer readable form is identical to the paper sequence listing. Additionally, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b) or 1.825(d), no new matter has been introduced in responding to the notice of defective response.

Respectfully,



Lawrence Harbin
Reg. No. 27,644

Date: October 19, 2005



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

U.S. APPLICATION NUMBER NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
10/510,698	Kurt Berlin	MHK-051-004

25582
 LAWRENCE HARBIN
 MCINTYRE HARBIN & KING LLP
 500 9TH STREET, S.E.
 WASHINGTON, DC 20003

INTERNATIONAL APPLICATION NO.	
PCT/IB03/01791	
I.A. FILING DATE	PRIORITY DATE
04/09/2003	04/09/2002

CONFIRMATION NO. 4311
 371 FORMALITIES LETTER



OC000000017051542

Date Mailed: 09/20/2005

NOTIFICATION OF DEFECTIVE RESPONSE

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated / Elected Office (37 CFR 1.495)

- Indication of Small Entity Status
- Priority Document
- Copy of the International Application filed on 10/08/2004
- Copy of the International Search Report filed on 10/08/2004
- Biochemical Sequence Diskette filed on 05/18/2005
- Oath or Declaration filed on 10/08/2004
- Biochemical Sequence Listing filed on 05/18/2005
- Small Entity Statement filed on 10/08/2004
- Request for Immediate Examination filed on 10/08/2004
- U.S. Basic National Fees filed on 10/08/2004
- Power of Attorney filed on 10/08/2004

Applicant's response filed 05/18/2005 is hereby acknowledged. The following requirements set forth in the NOTIFICATION of MISSING REQUIREMENTS mailed 03/18/2005 have not been completed.

- The paper or compact disc copy of the "Sequence Listing" is not the same as the computer readable form of the "Sequence Listing" as required by 37 CFR 1.821(e). Applicant must provide a substitute paper or compact disc copy of the "Sequence Listing", **as well as an amendment specifically directing its entry into the application** OR a substitute computer readable form (CRF) copy of the "Sequence Listing". These two items must be the same. Applicant must also provide a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d). If the effective filing date is on or after September 8, 2000, see the final rulemaking notice published in the Federal Register at 65 FR 54604 (September 8, 2000) and 1238 OG 145 (September 19, 2000).
- A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 CFR 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing." Applicant must provide a substitute computer readable form (CRF) copy of the "Sequence Listing" and a statement that the content

of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d).

Applicant is required to complete the response within a time limit of **ONE MONTH** from the date of this Notification or within the time remaining in the response set forth in the Notification of Missing Requirements, whichever is the longer. No extension of this time limit may be granted under 37 CFR 1.136, but the period for response set in the Notification of Missing Requirements may be extended under 37 CFR 1.136(a).

For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:

- For Rules Interpretation, call (571) 272-0951
- For Patentin Software Program Help, call Patent EBC at 1-866-217-9197 or directly at 703-305-3028 / 703-308-6845 between the hours of 6 a.m. and 12 midnight, Monday through Friday, EST.
- Send e-mail correspondence for Patentin Software Program Help @ ebc@uspto.gov

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

*A copy of this notice **MUST** be returned with the response.*

LAMONT M HUNTER

Telephone: (703) 308-9140 EXT 201

PART 1 - ATTORNEY/APPLICANT COPY

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
10/510,698	PCT/IB03/01791	MHK-051-004

MAIL W/ Leller

STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING
ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/510,698
Source: PCT/10
Date Processed by STIC: 7/5/05

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

W/ Leller

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.2.2 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

W/ Leller

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebs/efs/downloads/documents.htm>>, EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05): U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

Revised 01/24/05

BEST AVAILABLE COPY

Raw Sequence Listing Error Summary

ERROR DETECTED

SUGGESTED CORRECTION

SERIAL NUMBER: 10/570,698

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1 Wrapped Nucleics
 Wrapped Aminos The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
- 2 Invalid Line Length The rules require that a line not exceed 72 characters in length. This includes white spaces.
- 3 Misaligned Amino
 Numbering The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
- 4 Non-ASCII The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
- 5 Variable Length Sequence(s) contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
- 6 PatentIn 2.0
 "bug" A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) . Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
- 7 Skipped Sequences
 (OLD RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence:
 (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
 (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
 (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
 This sequence is intentionally skipped

 Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
- 8 Skipped Sequences
 (NEW RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence.
 <210> sequence id number
 <400> sequence id number
 000
- 9 Use of n's or Xaa's
 (NEW RULES) Use of n's and/or Xaa's have been detected in the Sequence Listing.
 Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
 In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
- 10 Invalid <213>
 Response Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
- 11 Use of <220>
 → Sequence(s) missing the <220> "Feature" and associated numeric identifiers and responses.
 Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.
 (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
- 12 PatentIn 2.0
 "bug" Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
- 13 Misuse of n/Xaa "n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid.



PCT

RAW SEQUENCE LISTING

DATE: 07/05/2005

PATENT APPLICATION: US/10/510,698

TIME: 11:16:36

Input Set : A:\MHKBERLIN.ST25.txt

Output Set: N:\CRF4\07052005\J510698.raw

3 <110> APPLICANT: EPIGENOMICS AG
 4 BERLIN, KURT
 6 <120> TITLE OF INVENTION: METHOD FOR ANALYSIS OF METHYLATED NUCLEIC ACIDS
 8 <130> FILE REFERENCE: MHK-051-004
 10 <140> CURRENT APPLICATION NUMBER: US 10/510,698
 11 <141> CURRENT FILING DATE: 2004-10-08
 13 <150> PRIOR APPLICATION NUMBER: PCT/IB03/01791
 14 <151> PRIOR FILING DATE: 2003-04-09
 16 <150> PRIOR APPLICATION NUMBER: US 60/370,690
 17 <151> PRIOR FILING DATE: 2002-04-09
 19 <160> NUMBER OF SEQ ID NOS: 15
 21 <170> SOFTWARE: PatentIn version 3.0
 23 <210> SEQ ID NO: 1
 24 <211> LENGTH: 22
 25 <212> TYPE: DNA
 26 <213> ORGANISM: Artificial
 28 <220> FEATURE:
 29 <223> OTHER INFORMATION: oligonucleotide primer
 31 <400> SEQUENCE: 1
 32 ttttcgtcgt tttaggttat cg 22
 35 <210> SEQ ID NO: 2
 36 <211> LENGTH: 23
 37 <212> TYPE: DNA
 38 <213> ORGANISM: Artificial
 40 <220> FEATURE:
 41 <223> OTHER INFORMATION: oligonucleotide primer
 43 <400> SEQUENCE: 2
 44 tttttgttgt tttaggttat tgg 23
 47 <210> SEQ ID NO: 3
 48 <211> LENGTH: 26
 49 <212> TYPE: DNA
 50 <213> ORGANISM: Artificial
 52 <220> FEATURE:
 53 <223> OTHER INFORMATION: oligonucleotide probe
 55 <400> SEQUENCE: 3
 56 ttcggacgtc gttgttcggt cgatgt 26
 59 <210> SEQ ID NO: 4
 60 <211> LENGTH: 23
 61 <212> TYPE: DNA
 62 <213> ORGANISM: Artificial
 64 <220> FEATURE:
 65 <223> OTHER INFORMATION: oligonucleotide primer
 67 <400> SEQUENCE: 4

Does Not Comply
Corrected Diskette Needed

P.3

BEST AVAILABLE COPY

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/510,698

DATE: 07/05/2005

TIME: 11:16:36

Input Set : A:\MHKBERLIN.ST25.txt

Output Set: N:\CRF4\07052005\J510698.raw

```

68 tttttgttgt tttaggttat tgg                                     23.
71 <210> SEQ ID NO: 5
72 <211> LENGTH: 21
73 <212> TYPE: DNA
74 <213> ORGANISM: Artificial
76 <220> FEATURE:
77 <223> OTHER INFORMATION: oligonucleotide primer
79 <400> SEQUENCE: 5
80 catatgctgt gaataaatta c                                       21
83 <210> SEQ ID NO: 6
84 <211> LENGTH: 26
85 <212> TYPE: DNA
86 <213> ORGANISM: Artificial
88 <220> FEATURE:
89 <223> OTHER INFORMATION: oligonucleotide probe
91 <400> SEQUENCE: 6
92 tttggatggt gttgtttggt tgatgt                                 26
95 <210> SEQ ID NO: 7
96 <211> LENGTH: 17
97 <212> TYPE: DNA
98 <213> ORGANISM: Artificial
100 <220> FEATURE:
101 <223> OTHER INFORMATION: oligonucleotide primer
103 <400> SEQUENCE: 7
104 cggatacgat ttcgggg                                           17
107 <210> SEQ ID NO: 8
108 <211> LENGTH: 22
109 <212> TYPE: DNA
110 <213> ORGANISM: Artificial
112 <220> FEATURE:
113 <223> OTHER INFORMATION: oligonucleotide primer
115 <400> SEQUENCE: 8
116 atacgataaa cgcaacaacg ac                                     22
119 <210> SEQ ID NO: 9
120 <211> LENGTH: 29
121 <212> TYPE: DNA
122 <213> ORGANISM: Artificial
124 <220> FEATURE:
125 <223> OTHER INFORMATION: oligonucleotide probe
127 <400> SEQUENCE: 9
128 atttggagtt tcgtgattcg cgttacgga                             29
131 <210> SEQ ID NO: 10
132 <211> LENGTH: 19
133 <212> TYPE: DNA
134 <213> ORGANISM: Artificial
136 <220> FEATURE:
137 <223> OTHER INFORMATION: oligonucleotide primer
139 <400> SEQUENCE: 10
140 tggatatgat tttggggta                                         19

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/510,698

DATE: 07/05/2005

TIME: 11:16:36

Input Set : A:\MHKBERLIN.ST25.txt

Output Set: N:\CRF4\07052005\J510698.raw

143 <210> SEQ ID NO: 11
144 <211> LENGTH: 24
145 <212> TYPE: DNA
146 <213> ORGANISM: Artificial
148 <220> FEATURE:
149 <223> OTHER INFORMATION: oligonucleotide primer
151 <400> SEQUENCE: 11
152 atatgataaa tgcaacaatg acat 24
155 <210> SEQ ID NO: 12
156 <211> LENGTH: 29
157 <212> TYPE: DNA
158 <213> ORGANISM: Artificial
160 <220> FEATURE:
161 <223> OTHER INFORMATION: oligonucleotide probe
163 <400> SEQUENCE: 12
164 atttgagatt ttgtgatttg tgttatgga 29
167 <210> SEQ ID NO: 13
168 <211> LENGTH: 25
169 <212> TYPE: DNA
170 <213> ORGANISM: Artificial
172 <220> FEATURE:
173 <223> OTHER INFORMATION: oligonucleotide primer
175 <400> SEQUENCE: 13
176 tccatattcc aaaccctata ccaaa 25
179 <210> SEQ ID NO: 14
180 <211> LENGTH: 22
181 <212> TYPE: DNA
182 <213> ORGANISM: Artificial
184 <220> FEATURE:
185 <223> OTHER INFORMATION: oligonucleotide primer
187 <400> SEQUENCE: 14
188 tgggattgag ggtaagaggg at 22
191 <210> SEQ ID NO: 15
192 <211> LENGTH: 22
193 <212> TYPE: DNA
194 <213> ORGANISM: Artificial
196 <220> FEATURE:
197 <223> OTHER INFORMATION: (artificial sequence)
199 <400> SEQUENCE: 15
200 attagtttcg ttaaggttc ga 22

insufficient explanation - what is source?

(see item 11 on Euro summary sheet)

RAW SEQUENCE LISTING ERROR SUMMARY

DATE: 07/05/2005

PATENT APPLICATION: US/10/510,698

TIME: 11:16:37

Input Set : A:\MHKBERLIN.ST25.txt

Output Set: N:\CRF4\07052005\J510698.raw

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:1,2,3,4,5,6,7,8,9,10,11,12,13,14,15

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/510,698

DATE: 07/05/2005

TIME: 11:16:37

Input Set : A:\MHKBERLIN.ST25.txt

Output Set: N:\CRF4\07052005\J510698.raw